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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,722	03/29/2001	Martin R. Handforth	13888ROUS02U	4607

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EXAMINER	
NORRIS, JEREMY C	

ART UNIT	PAPER NUMBER
2827	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,722	HANDFORTH ET AL.	
	Examiner	Art Unit	
	Jeremy C. Norris	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-28* is/are pending in the application.

4a) Of the above claim(s) *7-11 and 14-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,6,12 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Allowable Subject Matter

The indicated allowability of claims 4-6 and 12 is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow. Additionally, the finality of the previous Office Action has been withdrawn and the amendment filed 30 September 2003 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5, 6, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,136,471 (hereafter Inasaka) in view of US 6,246,112 (hereafter Ball).

Inasaka discloses, referring to figure 1, an interconnection device comprising: first (24) and second outer layers (14), each including substrate material, and at least one inner layer (shown but not specifically referenced) disposed between said first and second outer layers, said inner layer including at least one conductive layer (18) disposed on substrate material proximate to an edge of the interconnection device and being accessible for direct electrical connection, wherein at least one conductive protrusion (16) is formed on said conductive inner layer. Inasaka does not specifically state that the inner power layer (18) comprises traces [claim 1]. However, it is well known in the art to comprise power layers of conductive traces as evidenced by Ball (see col. 2, line 55 – col. 3, line 15). Therefore, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to comprise the inner power layer of Inasaka of conductive traces as well known in the art and evidenced by Ball. The motivation for doing so would have been to use an old and known technique and thus avoid the additional cost of exotic methods of production.

Furthermore, the modified invention of Inasaka discloses that said conductive inner layer trace extends outward from the edge of the interconnection device [claim 2], wherein at least a portion of said first outer layer is removed to provide access to said conductive inner layer trace [claim 3], wherein the protrusion can be either malleable [claim 5] or resilient [claim 6] (see Inasaka col. 2, lines 20-40) and where the inner layer substrate material is ceramic (see Inasaka col. 2, lines 20-25) [claim 12].

Additionally, while Inasaka does not specifically disclose the inner layer substrate material to be organic, it would have been obvious, to one having ordinary skill in the

art, at the time of invention, to further modify the invention of Inasaka so as to comprise the inner layer substrate material of an organic since it is well known in the art, and again evidenced by Ball, that ceramic and organic dielectric materials are art recognized equivalents (see Ball col. 3, lines 5-15). The motivation for doing so would have to use a standard PCB material that could be easily stacked and laminated. Moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments submitted 30 September 2003 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Applicants' arguments submitted 24 January 2003, Applicants contended that Inasaka failed to anticipate the claimed invention because Inasaka failed to disclose to or suggest an inner layer with a conductive trace. However, the Ball reference has been applied in the instant rejection to provide the alleged deficiency. Therefore, Applicants' arguments are moot in light of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Tuesday - Friday, 10am - 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-308-0725.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN

David A. Zarneke
Primary Exmr
11/26/03